

a highly important factor in promoting an increased agricultural output. These valuable crop-stimulants are not as well understood by farmers generally as they might be. An understanding by the farming community of their use from the standpoints of soil, crop, climate, and economics is of first importance. A good deal has been accomplished in this educational matter, but much remains to be done. Official experts are at the service of producers, and it behoves any settler who is in doubt as to the manures to use for his particular soil, crop, and climate to obtain advice on the subject from a scientific source.

USE OF GOOD SEED.—CEREAL-SEED IMPROVEMENT.

The sowing of none but clean seed of good vitality is of great importance to our agricultural industries. Unclean seed is dear at the cheapest price, on account of the waste of time, money, and labour, and of the far-reaching effects of polluted land involved in the sowing of impure and weak seed. The significance of this subject must be well enough known to any settler without further enlargement here.

In the cereal-growing sections of the Dominion the improvement of grain used for seed purposes presents an important phase of more productive agriculture. Much can be done by farmers themselves in this direction, and, when considered collectively, with most marked effect upon grain-growing in the Dominion. Much improvement of grain crops can be effected on the farm itself by a simple form of selection. This consists of making provision each year on new ground for a seed-plot. A standard local variety of wheat or oats, or of both, is chosen, and previous to cutting the crop a number of the best plants, judged from all standpoints, are selected and harvested by hand. The best seed from these is sown next year on the seed-plot, varying in size according to the extent of that cereal usually sown. Previous to the next harvest selection from the seed-plot is made, and the surplus seed therefrom is reserved for the seeding of the general crop. The process is continued for a few years, and eventually valuable high-yielding strains are produced. Apart from this valuable cereal-selection work much good to grain-growing may accrue by the trial of varieties and the eventual adoption of those that best suit local soils and climatic conditions.

SUITABLE GRASS-MIXTURES AND PASTURE-FORMATION.

The laying-down of pastures with grass-mixtures suited to both soil and climate is an economic factor which, if more or less universally adopted, is also calculated to materially assist in increasing the production of the country. For moist climates and areas grass-mixtures suited to such conditions should be employed, and should include such grasses as timothy, meadow-foxtail, meadow-fescue, and Italian rye, and clovers such as alsike and cow-grass. For very wet more or less undrainable soils glyceria fluitans is very suitable. Rich soils, such as those of alluvial formation, are better fitted to hold rye-grass, and hence for such this grass should be the dominant mixture-constituent. Red and white clover are also most adapted to these richer soils. For the lighter, more porous, and drier soils grasses and legumes of the deep-rooting type, including crested dogstail, sheep's fescue, tall oat-grass, yellow oat-grass, poa trivialis, sheep's burnet, lucerne, suckling-clover, and